AMENDMENTS TO THE CLAIMS

A Listing of Claims is provided as follows and will replace any previous listing. No new matter has been added.

Listing of Claims:

1. (Currently Amended) A method of manufacturing a ~~Group III nitride~~ GaN single crystal comprising:

growing a ~~Group III nitride~~ GaN single crystal by crystallizing an aeriform substance ~~obtained from a material for the Group III nitride single crystal,~~ consisting essentially of GaH_x

~~wherein the Group III element is Ga, and the aeriform substance includes GaH_x~~.

2. (Canceled)

3. (Original) The method according to claim 1, wherein the single crystal is grown in an atmosphere of a nitrogen (N) containing gas.

4. (Original) The method according to claim 3, wherein the nitrogen (N) containing gas includes at least one selected from the group consisting of NH_3, N_2, and inert gas.

5. (Previously Presented) The method according to claim 1, wherein the material is at least one selected from the group consisting of Ga and GaN powder.

6. (Original) The method according to claim 1, wherein the aeriform substance is produced by heating and subliming the material, and the crystallization is performed by cooling the aeriform substance and by allowing the aeriform substance and a reactive gas to react with each other.

7. (Original) The method according to claim 6, wherein the aeriform substance is supplied to a crystal generation region by a carrier gas, and the single crystal is grown in the crystal generation region.

8. (Original) The method according to claim 6, wherein the single crystal is grown in an atmosphere of a nitrogen (N) containing gas.

9. (Original) The method according to claim 8, wherein the nitrogen (N) containing gas is a mixed gas containing NH_3 and N_2.

10. (Original) The method according to claim 6, wherein the reactive gas includes at least a NH_3 gas, and further includes at least one selected from the group consisting of a N_2 gas and inert gas.

11. (Previously Presented) The method according to claim 6, wherein the material is at least one selected from the group consisting of Ga and GaN powder.

12. (Original) The method according to claim 7, wherein a temperature (T1(°C)) of the material and a temperature (T2(°C)) of the crystal generation region are controlled independently, and the single crystal is grown while satisfying $T1 > T2$.

13. (Original) The method according to claim 7, wherein the carrier gas includes at least one selected from the group consisting of a N_2 gas, inert gas, and hydrogen gas.

14. (Original) The method according to claim 8, wherein the nitrogen (N) containing gas includes impurities so that the impurities are introduced into the Group III nitride single crystal.

15. (Original) The method according to claim 1, wherein the aeriform substance is produced by heating and evaporating the material, and the crystallization is performed by allowing the aeriform substance and a reactive gas to react with each other.

16. (Original) The method according to claim 15, wherein the aeriform substance is supplied to a crystal generation region by a carrier gas, and the single crystal is grown in the crystal generation region.

17. (Canceled)

18. (Original) The method according to claim 15, wherein the single crystal is grown in an atmosphere of a nitrogen (N) containing gas.

19. (Original) The method according to claim 18, wherein the nitrogen (N) containing gas includes at least one selected from the group consisting of a N_2 gas and inert gas.

20. (Original) The method according to claim 16, wherein the carrier gas includes at least one selected from the group consisting of a N_2 gas, inert gas, and hydrogen gas.

21. (Original) The method according to claim 15, wherein the reactive gas includes at least a NH_3 gas, and further includes at least one selected from the group consisting of a N_2 gas and inert gas.

22. (Canceled)

23. (Original) The method according to claim 18, wherein the nitrogen (N) containing gas includes impurities so that the impurities are introduced into the Group III nitride single crystal.

24. (Original) The method according to claim 15, wherein the material is heated, decomposed, and evaporated.

25. (Original) The method according to claim 24, wherein the aeriform substance is supplied to a crystal generation region by a carrier gas, and the single crystal is grown in the crystal generation region.

26. (Canceled)

27. (Original) The method according to claim 24, wherein the single crystal is grown in an atmosphere of a nitrogen (N) containing gas.

28. (Original) The method according to claim 27, wherein the nitrogen (N) containing gas includes at least one selected from the group consisting of a N_2 gas and inert gas.

29. (Original) The method according to claim 25, wherein the carrier gas includes at least one selected from the group consisting of a N_2 gas, inert gas, and hydrogen gas.

30. (Original) The method according to claim 24, wherein the reactive gas includes at least a NH_3 gas, and further includes at least one selected from the group consisting of a N_2 gas and inert gas.

31. (Previously Presented) The method according to claim 24, wherein the material is GaN powder.

32. (Original) The method according to claim 27, wherein the nitrogen (N) containing gas includes impurities so that the impurities are introduced into the Group III nitride single crystal.

33. (Previously presented) The method according to claim 55, wherein the pressure is more than 1 atm and not more than 10000 atm (more than $1 \times 1.013 \times 10^5$ Pa and not more than $10000 \times 1.013 \times 10^5$ Pa).

34. (Original) The method according to claim 1, wherein the material is heated at 300°C to 2400°C.

35. (Original) The method according to claim 1, wherein the material is added during a process of growing the single crystal.

36. (Original) The method according to claim 1, wherein a Group III nitride is prepared as a nucleus of crystal growth, and then the single crystal is grown on the surface of the nucleus.

37. (Original) The method according to claim 36, wherein the Group III nitride that serves as a nucleus is a single crystal or amorphous.

38. (Original) The method according to claim 36, wherein the Group III nitride that serves as a nucleus is in the form of a thin film.

39. (Original) The method according to claim 38, wherein the thin film is formed on a substrate.

40. (Original) The method according to claim 36, wherein the Group III nitride that serves as a nucleus has a maximum diameter of not less than 2 cm.

41. (Original) The method according to claim 36, wherein the Group III nitride that serves as a nucleus has a maximum diameter of not less than 3 cm.

42. (Original) The method according to claim 36, wherein the Group III nitride that serves as a nucleus has a maximum diameter of not less than 5 cm.

43. (Original) The method according to claim 1, wherein the single crystal is grown on a substrate.

44. (Original) The method according to claim 43, wherein the substrate is made of at least one material selected from the group consisting of amorphous gallium nitride (GaN), amorphous aluminum nitride (AlN), sapphire, silicon (Si), gallium arsenide (GaAs), gallium nitride (GaN), aluminum nitride (AlN), silicon carbide (SiC), boron nitride (BN), lithium gallium oxide ($LiGaO_2$), zirconium diboride (ZrB_2), zinc oxide (ZnO), glass, metal, boron phosphide (BP), MoS_2, $LaAlO_3$, NbN, $MnFe_2O_4$, $ZnFe_2O_4$, ZrN, TiN, gallium phosphide (GaP), $MgAl_2O_4$, $NdGaO_3$, $LiAlO_2$, $ScAlMgO_4$, and $Ca_8La_2(PO_4)_6O_2$.

45. (Original) The method according to claim 1, wherein a growth rate of the Group III nitride single crystal is not less than 100 μm/h.

46. (Original) The method according to claim 36, wherein the Group III nitride is prepared in a crystal generation region, and then a reactive gas flows on the Group III nitride.

47–52. (Canceled)

53. (Previously Presented) The method according to claim 1, comprising forming the aeriform substance that includes GaH_x by heating and subliming or evaporating the material for the Group III nitride single crystal in a presence of hydrogen.

54. (Canceled)

55. (Previously Presented) The method according to claim 1, wherein the single crystal is grown under pressure.

56. (Currently Amended) A method of manufacturing a ~~Group III nitride~~ GaN single crystal comprising:

heating a material for the ~~Group III nitride~~ GaN single crystal in the presence of hydrogen, so that the material is sublimed or evaporated into an aeriform substance; and

crystallizing the aeriform substance to grow a ~~Group III nitride~~ GaN single crystal,

wherein ~~the Group III element is Ga~~ the aeriform substance includes GaH_x as the main component, and the ~~Group III nitride~~ GaN single crystal is grown by allowing the aeriform substance and a NH_3 gas to react with each other.

57. (Canceled)

58. (Previously Presented) The method according to claim 56, wherein the single crystal is grown under pressure.

59 - 60. (Canceled)

61. (New) A method for manufacturing a GaN single crystal comprising:

generating or introducing a GaH_x aeriform substance; and

growing a GaN single crystal by crystallizing the GaH_x aeriform substance.

62. (New) A method for manufacturing a GaN single crystal comprising:

growing a GaN single crystal by crystallizing an aeriform substance that includes GaH_x as the main component.